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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/621,825	07/21/2000	Jung Tae Kang	06192.0146AA	4506

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EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/621,825

Applicant(s)

KANG ET AL.

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 6-8 and 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 9-13 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is made in response to applicant's request for reconsideration filed on 05/20/2004 (entered into the file wrapper as Paper No. 17). Claims 2-4, 6-8 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species I and III, and claims 1, 5, 9-13 and 18-22 are currently considered. An action follows below:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al (USPN: 5,835,139), hereinafter Yun, and further in view of Murai (USPN: 5,986,726).

As per claims 1 and 5, Yun discloses an information processing apparatus (see a LCD device as shown in fig. 7) comprising a LCD module (LCD assembly structure as shown in fig. 6) including a backlight assembly (an assembly including elements 110-180, see fig. 6) having a light source portion (a luminescent lamp 110) and a wedge-shaped light conducting plate (130), a LCD panel (a liquid crystal panel 300) having a source printed circuit board on one side of the LCD panel (see fig. 6), a mold frame (a first support frame 190) and a chassis (a second frame support 400); and an information processing module (a driving circuit board 23, col. 2, lines 18-20) having a LCD panel driving circuit (a control circuit, col. 2, lines 7-10) and located behind the rear part of the backlight unit (col. 2, lines 16-20). Accordingly, the difference between the

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claimed invention as specified in claims above and the Yun reference is that Yun does not disclose expressly the particular shapes of the mold frame and the chassis, in the manner as recited in the claims 1 and 5.

However, as noting in fig. 5, Murai discloses a related information processing apparatus (fig. 5) comprising a mold frame (a frame structure corresponding to the claimed mold frame and defined by the metal sheet 1 and the resin frame 2, col. 4, lines 10-12), that accepts the backlight assembly (7) (figs. 1, 2 and 5, col. 4, lines 10-12) and a LCD panel (5) (figs. 1, 2 and 5, col. 3, lines 64-66), and formed to be gradually thinner as further advancing from a first side (the side to the left of the light guiding plate 7, as shown in figs. 1 and 5) adjoining the light source toward a second side (the side to the right of the light guiding plate 7) opposite the first side. Further see col. 4, lines 16-39. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to design the Yun mold frame to be gradually thinner as further advancing from a first side adjoining the light source toward a second side opposite the first side, in view of the teaching in the Murai reference, because this would provide an apparatus with features of small size, thin thickness and light weight, as taught by Murai (col. 2, lines 1-3). Accordingly, the combination of Murai and Yun discloses all the claimed limitation except for the particular shape of the chassis, in the manner as recited in the claims 1 and 5.

However, while Murai may not exemplify particular shape of the chassis as presently claimed, it would have been within the level of skill in the art and obvious to one having ordinary skill to engineering design the shape of the Yun chassis as desired as the shape of the mold frame, which is taught by the Murai reference, and as was judicially recognized in re Dailey, 149 USPQ 47 (CCPA 1976), because this would provide an apparatus with features of

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smaller size, thinner thickness and lighter weight, as taught by Murai (col. 2, lines 1-3).

Therefore, it would have been obvious to one having ordinary skill to obtain the invention of claims 1 and 5.

As per claim 18, Yun discloses an information processing apparatus (see a LCD device as shown in fig. 7) comprising a LCD module (LCD assembly structure as shown in fig. 6) including a backlight assembly (an assembly including elements 110-180, see fig. 6) having a light source portion (a luminescent lamp 110) and a wedge-shaped light conducting plate (130), a LCD panel (a liquid crystal panel 300) having a source printed circuit board on one side of the LCD panel (see fig. 6), a mold frame (a first support frame 190) and a chassis (a second frame support 400); and an information processing module (a driving circuit board 23, col. 2, lines 18-20) having a LCD panel driving circuit (a control circuit, col. 2, lines 7-10) and located behind the rear part of the backlight unit (col. 2, lines 16-20). Accordingly, the difference between the claimed invention as specified in claim 18 and the Yun reference is that Yun does not disclose expressly the information processing module (23) directly attached on a rear plane of the mold frame (claim 18, line 11).

However, as noting in fig. 5, Murai discloses a related information processing apparatus (fig. 5) comprising a mold frame (a frame structure corresponding to the claimed mold frame and defined by the metal sheet 1 and the resin frame 2, col. 4, lines 10-12), that accepts the backlight assembly (7) (figs. 1, 2 and 5, col. 4, lines 10-12) and a LCD panel (5) (figs. 1, 2 and 5, col. 3, lines 64-66), and an information processing module (a module including a driver circuit board 4 and an isolation film 3) directly attached to a rear plane of the mold frame (a bottom portion of a

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metal sheet 1, i.e., a bottom of the frame structure), for generating and supplying a driving signal to drive LCD panel via the source printed circuit board (a driver circuit provided in peripheral edges of the circuit array substrate, col. 5, lines 40-53). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to relocate the Yun information processing module (23) on a rear plane of the Yun mold frame, in view of the teaching in the Murai reference, because this would substantially prevent electromagnetic wave noises generated by a driver circuit board from interfering with other electronic components, as taught by Murai (col. 2, lines 8-11).

Regarding to claim 19, Yun further teaches the LCD module and the information processing module, both fixed together between a front case (520) and a rear case (500) coupled to each other (fig. 7, col. 4, lines 55-65).

4. Claims 9-13 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun in view of Murai, as applied to claims 5 and 18 above, and further in view of Williamson et al. (USPN: 5,475,381), hereinafter Williamson.

As per claims 9 and 20, as discussed above, Yun discloses an information processing module (a driving circuit board 23, col. 2, lines 18-20) having a LCD panel driving circuit (a control circuit, col. 2, lines 7-10), but does not disclose expressly that the information processing module comprising a central processing unit, means for storing or supplying data and signal processing means for processing video data. Further, Yun discloses that the body of the computer is in a separate housing. Furthermore, Yun's body of the computer inherently comprising a central processing unit, means for storing or supplying data and signal processing means for processing video data, in order to display an image on the display unit. Accordingly, the

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difference between the claimed invention as specified in claim above and the combination of Yun and Murai references is that the central processing unit, means for storing or supplying data and signal processing means for processing video data are all located in a separate housing, instead on the module containing a LCD panel driving circuit. However, as noting in figs. 1-2, Williamson discloses an information processing circuit located in the rear of the LCD module (52) and comprising a LCD panel driving circuit (a LCD controller 58), a central processing unit (a microcontroller 56, col. 3, lines 27-32), means for storing or supplying data (a storage unit 61, col. 3, lines 38-41) and signal processing means for processing video data (memory controller 57). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to utilize Williamson's teachings above, i.e., locating a central processing unit, means for storing or supplying data and signal processing means for processing video data on the same module which the LCD panel driving circuit is integrated on, in the apparatus of Yun because this would reduce the size of the apparatus which is small enough to fit into a pocket, as taught by Williamson (col. 2, lines 54-60).

Regarding to claim 10, see the rejection to claims 1, 5 and 18 above.

Regarding to claim 11, see the rejection to claim 19 above.

Regarding to claims 12 and 21, Williamson further teaches the storage unit (61) comprising RAMs (62, 63) and ROM (64) (col. 3, lines 38-41).

Regarding to claims 13 and 22, Williamson further teaches the information processing module further comprising interfacing means for interfacing data with an external information processing module (col. 7, lines 8-10), sound control means (system speaker 72, col. 4, lines 17-

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19) and communicating means for performing external communication (IR emitter 53 and IR receiver 54, see fig. 2).

Response to Arguments

5. Applicants' arguments on pages 2-4 of the papers filed on 5/20/2004, with respect to independent claims 1 and 5, have been fully considered but they are not persuasive. Applicants argue that none of the reference suggests modifying the chassis to be gradually thinner as presently claimed. See page 3, lines 14-15. Examiner agrees. However, as discussed above, Murai teaches that the particular shape of the mold frame, i.e., the mold frame formed to be gradually thinner as further advancing from a first side of accepting to place the light source portion toward a second side in opposition to the first side, would provide a display device with features of small size, thin thickness and light weight, as taught by Murai (col. 2, lines 1-3). While Murai may not exemplify particular shape of the chassis as presently claimed, one of ordinary skill in the art would have found to form the mold frame of Yun as well as the chassis of Yun to be gradually thinner, as further advancing from a first side of accepting to place the light source portion toward a second side in opposition to the first side, so as to obtain a display device with features of smaller size, thinner thickness and lighter weight, in view of the teaching in the Murai reference. Furthermore, it would have been within the level of skill in the art and obvious to one having ordinary skill to engineering design the shape an element as desired as was judicially recognized in re Dailey, 149 USPQ 47 (CCPA 1976).

6. Applicant's arguments on pages 4-5 of the papers filed on 5/20/2004, with respect to independent claim 18, have been considered but are moot in view of the new ground of rejection. See the new ground of rejection above.

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Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-03770377.

JHN
July 30, 2004


Jimmy H. Nguyen
Examiner
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